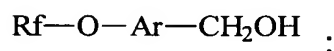
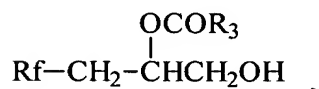
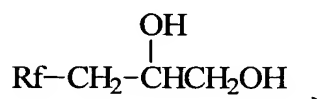
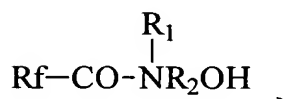
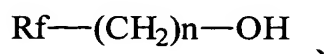
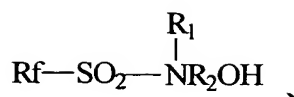


What is claimed is

1. A solvent-based fluorinated water and oil repellent, comprising 20-50% (w/w) blocked polyfluorourethane compound and 50-80% (w/w) solvent.
2. The solvent-based fluorinated water and oil repellent according to Claim 1, wherein said solvent comprises methanol, ethanol, isopropanol, ethyl acetate, butyl acetate, acetone, butanone, methyl isobutyl ketone, ethylene glycol, hexylene glycol, propylene glycol, dipropyleneglycol monobutylether, dipropylene glycol, butylcellosolve, or mixtures thereof.
3. The solvent-based fluorinated water and oil repellent according to Claim 1, wherein the reaction agents of said blocked polyfluorourethane comprise:
 - fluoroalcohol compound;
 - diisocyanate or polymeric isocyanate compound;
 - cross-linking agent;
 - blocking agent; and
 - solvent.
4. The solvent-based fluorinated water and oil repellent according to Claim 3, wherein said fluoroalcohol compound comprises perfluoroalkyl alcohol compound or perfluoropolyether alcohol compound.
5. The solvent-based fluorinated water and oil repellent according to Claim 3, wherein said fluoroalcohol compound comprises comopunds having the following structures:

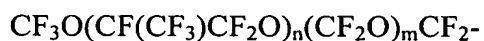


wherein Rf is C₃₋₂₁ polyfluoroalkyl, polyfluoro alkyl or perfluoropolyether having average molecular weight of 400 - 5000, R₁ is hydrogen or C₁₋₁₀ alkyl, R₂ is C₁₋₁₀ alkylene, R₃ is hydrogen or methyl, Ar is substituted phenyl, and n is an integer from 1 to 10.

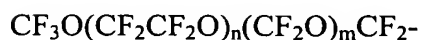
6. The solvent-based fluorinated water and oil repellent according to Claim 5, wherein the formula of said perfluoropolyether comprises:



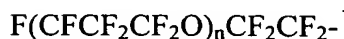
wherein n is an integer from 3 to 30.



wherein n is an integer from 2 to 30 and m is an integer from 3 to 70.

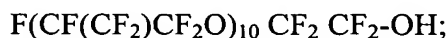
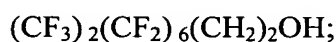
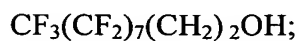
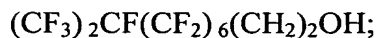
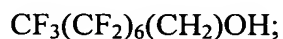
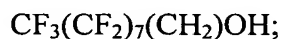


wherein n is an integer from 2 to 40 and m is an integer from 4 to 70.



wherein n is an integer from 3 to 30.

7. The solvent-based fluorinated water and oil repellent according to Claim 4, wherein said fluoroalcohol compound comprises:



or mixtures thereof.

8. The solvent-based fluorinated water and oil repellent according to Claim 3, wherein said diisocyanate or polymeric diisocyanate compound comprises aromatic diisocyanate or polymers thereof, or aliphatic diisocyanate or polymers thereof.
9. The solvent-based fluorinated water and oil repellent according to Claim 8, wherein said aromatic diisocyanate or polymers thereof comprise: toluene diisocyanate (TDI) or polymers thereof, methylene diphenyl diisocyanate (MDI) or polymers thereof, naphthylene diisocyanate (NDI), or polymers thereof, mixtures of said diisocyanate or mixtures of said diisocyanate polymers.

10. The solvent-based fluorinated water and oil repellent according to Claim 8, wherein said aliphatic diisocyanate or polymers thereof comprise: hexamethylene diisocyanate (HDI), xylene diisocyanate (XDI), dicyclohexylmethane diisocyanate (H₁₂MDI), isophorone diisocyanate (IPDI), cyclobutane diisocyanate, trans-cyclohexane diisocyanate (CHDI), cyclohexane bis(methylene diisocyanate) (BDI), 1,3-bis(methylisocyanate) cyclohexane (H₆XDI), 3-isocyanato-3,5,5-trimethylcyclohexylisocyanate, 1,4-tetramethylene diisocyanate, hexamethylene 1,4-diisocyanate, 1,12-dodecane diisocyanate, trimethylhexamethylene diisocyanate (TMDI), 2-methyl-1,5-pentamethylene diisocyanate, tetramethylxylene diisocyanate (TMXDI), mixtures of said diisocyanate, polymers of said diisocyanate, or mixtures of said diisocyanate polymers.
11. The solvent-based fluorinated water and oil repellent according to Claim 3, wherein said cross-linking agent is a triol cross-linking agent.
12. The solvent-based fluorinated water and oil repellent according to Claim 11, wherein said triol cross-linking agent comprises poly(oxypropylene)triol, polyoxypropylene polyoxyethylene triol, trimethylol propane, glycerol, hexane triol, or mixtures thereof.
13. The solvent-based fluorinated water and oil repellent according to Claim 3, wherein said blocking agent comprises: methanol, ethanol, ethylmercaptain, β -thionaphthol, N-methylaniline, acetoxime, Cyclohexanone oxime, Butanone oxime, diethylmalonate, acetylacetone, acetoethylacetate, ϵ -caprolactam, 3,5-dimethylpyrazole, diisopropylamine, phenol, or mixtures thereof.

14. The solvent-based fluorinated water and oil repellent according to Claim 13, wherein said solvent comprises methanol, ethanol, isopropanol, ethyl acetate, butyl acetate, acetone, butanone, methyl isobutyl ketone, ethylene glycol, hexylene glycol, propylene glycol, dipropyleneglycol monobutylether, dipropylene glycol, butylcellosolve, or mixture thereof.
15. A process for producing solvent-based fluorinated water and oil repellent, comprising the steps of:
- (a) reacting cross-linking agent with diisocyanate or polymeric isocyanate compound to form a prepolymer having 1 ~ 3 mol equivalent percentage of terminal -NCO group;
 - (b) reacting said prepolymer with fluoroalcohol to form polyfluorourethane polymer having 0.5 ~ 1.5 mol equivalent percentage of unreacted terminal -NCO groups; and
 - (c) blocking said -NCO groups with blocking agent to obtain blocked polyfluorourethane.
16. The process according to Claim 15, wherein said process is batch polymerization reaction or semi-continuous polymerization reaction.
17. The process according to Claim 15, wherein in step (a), 0.4 ~ 0.6 mol equivalent percentage of cross-linking agent reacts with 0.8 ~ 1.2 mol equivalent percentage of diisocyanate or polymeric isocyanate to form a prepolymer.
18. The process according to Claim 15, wherein in step (b), prepolymer obtained in step (a) reacts with 0.3 ~ 0.6 mol equivalent percentage of fluoroalcohol compound to

form polyfluorourethane polymer.

19. The process according to Claim 15, wherein in step (c), 0.05 ~ 0.4 mol equivalent percentage of blocking agent is used to block unreacted –NCO groups in step (b) to obtain blocked polyfluorourethane.
20. A process for producing solvent-based fluorinated water and oil repellent, comprising the steps of:
 - (a) reacting 0.4 ~ 0.6 mol equivalent percentage of cross-linking agent with 0.8 ~ 1.2 mol equivalent percentage of diisocyanate or polymeric diisocyanate compound to form a prepolymer having 1 ~ 3 mol equivalent percentage of terminal –NCO groups;
 - (b) reacting said prepolymer with 0.3 ~ 0.6 mol equivalent percentage of fluoroalcohol to form polyfluorourethane having 0.5 ~ 1.5 mol equivalent percentage of unreacted terminal –NCO groups; and
 - (c) blocking said –NCO groups with 0.05 ~ 0.4 mol equivalent percentage of blocking agent to obtain blocked polyfluorourethane.
21. The process according to Claim 20, wherein said process further comprises the step of adding 50 ~ 80 mol equivalent percentage of solvent in each step.
22. The process according to Claim 20, wherein the reaction temperature in steps (a), (b), and (c) range between 20°C and 120°C.
23. The process according to Claim 20, wherein the reaction time in step (a) is 0.5 ~ 4 hours.

24. The process according to Claim 20, wherein the reaction time in step (b) is 2 ~ 24 hours.
25. The process according to Claim 20, herein the reaction time in step (c) is 0.5 ~ 4 hours.
26. A method for treating textile or leather, comprising the step of applying solvent-based fluorinated water and oil repellents of Claim 1 to textile or leather to obtain textile or leather with water and oil repellency.
27. The method according to Claim 26, wherein said method comprises applying said solvent-based fluorinated water and oil repellent on textile or leather by means of padding, atomization, coating or spraying to obtain textile or leather with water and oil repellency.
28. A textile or leather with water and oil repellent which is treated with the solvent-based fluorinated water and oil repellents of Claim 1.